

**Amendments to the Specification:**

Please add the following new FIGS. 28 A-D after paragraph [0047].

[0047.1] FIGS. 28 A-D are sectional views illustrating an alternative embodiment of a single chamber litter cartridge with a large storage cover in accordance with the present invention.

Please add the following new paragraphs after paragraph [0097]:

[0097.1] The generally rectangular, disposable and non-compartmentalized litter cartridge comprises the litter tray 206 having a single chamber 206c as shown in Figs. 18A-28 having a litter area or portion 206a and a waste area or portion 206b without a barrier wall between the litter and waste areas, 206a and 206b, respectively. The litter tray 206 is configured to be inserted into the self-cleaning or manual litter box machine 200. The litter box includes a housing 202 with a rake assembly 222 connected to the housing that supports a moveable rake 222a. The single chamber 206c stretches across the entire length of the litter tray 206. The single chamber 206c of the litter tray 206 carries a predetermined amount of litter 10 and stores solid cat wastes 11 at one end without any barrier wall interfering with the planar movement of the rake 222a during its travel across the chamber 206c combing the litter 10 to collect and store the cat solid wastes 11 in portion 206b at one end of the chamber 206c of the litter tray 206.

[0097.2] The waste area or portion 206b within the single chamber 206c of the tray 206 stores the litter 10 mixed with the solid litter wastes 11 that reduces the odor from the stored animal solid waste 11. The litter tray 206 is dimensioned to receive the rake assembly 222 and its corresponding rake 222a. The single chamber 206c of the tray 206 is further dimensioned to cooperate with the litter box 200 so that the rake 222a extends into the litter 10 as shown in Figs. 27A-27D to comb the litter 10 for the solid cat waste 11 by an amount sufficient to enable the rake 222a to move the solid cat waste 11 as shown in Figs. 27A-27D. The rake 222a moves in a linear motion at a predetermined fixed or constant height above a tray floor 206d from the litter area 206a into the waste area 206b. The waste lid 228 is configured to be rotatably attached to at least one sidewall of the tray 206 and has a closed position, which covers the waste area 206b to prevent access to the waste area by a cat (not shown) when the lid 228 is in a closed position. When the lid 228 is in an open position, it provides access to the waste area 206b for deposit of solid cat wastes 11 by the moveable rake 222a.

[0097.3] The waste lid 228 includes at least one coupling mechanism 236, which can cooperate with the external coupling device 207 attached to the system lid 204 on the litter box machine 200 for enabling the waste lid 228 to be opened and closed under the influence of the external coupling device 207. Thus, the system lid 204 and the tray lid 228, which is mechanically coupled to the system lid 204, both pivot upwardly due to the camming action of the lift arm 220 on the litter box machine 200 as shown in FIGS. 22A-C. Therefore, the opening of the tray lid 228 provides the rake 222a access to the waste area 206b in order to receive the solid waste 11 combed from the litter area 206a within

the single chamber 206c. The reverse stroke of the rake assembly 222 causes the system lid 204 to return the waste lid 228 to its closed position over the waste end 232. The system lid 204 and the waste lid 228 are coupled to one another through the mechanical connection between the magnetic materials 207 and 236 on the system and waste lids, respectively. So as the rake 222a moves away from the system and waste lids 204 and 228, respectively, the coupled lids form a means to conveniently cover the solid waste materials 11 at the waste end 232 of the single chamber 206c of the tray 206.

[0097.4] As shown in Figs. 18A, 18B and 19, the disposable litter cartridge or litter tray 206 for use with a litter cleaning machine 200 incorporates the rake 222a for combing the through the litter 10 to collect the solid cat wastes 11 in the litter area 206a of the generally rectangular, non-compartmentalized and disposable litter cartridge 206. The chamber 206c for holding the cat litter 10 includes a flat bottom wall 206d defining the floor of the litter box machine 200. A first pair of opposed parallel sidewalls 206e and 206f of a predetermined vertical height and length are rigidly connected to the bottom wall 206d. A second pair of opposed parallel sidewalls 206g and 206h of a predetermined vertical height generally match the vertical height of the first pair of sidewalls 206e and 206f. The first and second pair of sidewalls 206e, 206f and 206g, 206h, respectively are rigidly connected to one another and to the bottom wall 206d at the peripheral edges of the bottom wall 206d to form the four sidewalls and bottom 206d of the single chamber 206c of the rectangular tray 206 without any barrier across the width of the single chamber 206c.

[0097.5] Turning now to Figs. 18A, 18B, 19, and 27A-27D, the waste lid 228 is rotatably attached to at least one sidewall adjacent the waste end 232 and waste area 206b. For example, as shown in Fig. 19, the waste lid 228 is mechanically attached to sidewall 206h for covering a predetermined portion of the bottom wall 206d to define the litter area 206a from the storage waste area 206b within the single chamber 206c of the tray 206 without a barrier wall 22 between the litter and waste areas, 206a and 206b, respectively. Again, the coupling mechanism between the system lid 204 and the waste lid 228 is at least one magnet fixedly attached to the underside of the system lid 204 that engages at least one magnet material 236 fixedly attached to the top surface of the waste lid 228 for opening and closing the waste lid 228 to define the storage waste area 206b. The aforesaid camming action of the litter box machine 200 pivots the system lid 204 from a closed to open position and then back again as the rake assembly 222 sweeps across the litter chamber 206c during both a forward and reverse stroke from the litter area 206a to the waste area 206b and back again. At all times, the rake 222a traveling toward the storage waste area 206b from the litter area remains at a predetermined and constant height above the bottom 206d of the litter chamber 206c and at a fixed depth within the cat litter 10 from the litter area 206a to the waste storage area 206b for depositing the solid animal waste 11 under the waste lid 228 of the non-compartmentalized tray 206 without a barrier wall 22 within the single chamber 206c. A storage cover 206i is placed over the top outer edges of the four sidewalls to close the tray for shipping and storage purposes. The storage cover 206i and the four joined

sidewalls with the bottom wall 206d form a box structure protecting the litter tray 206 from damage while being shipped or stored.

[0097.6] The disposable and non-compartmentalized litter cartridge 206 without a barrier wall 22 within the chamber 206c is designed for use with the self-cleaning litter machine 200. The litter machine 200 incorporates the housing 202 that fits over the top of the cartridge 206 placed on a flat surface such as the floor of building. The housing 202 includes the chassis assembly 216 attached to the housing 202 and the drive assembly 218 is attached to the chassis assembly 216. The rake assembly 222 is attached to the drive assembly 218 and the moveable rake 222a is attached to the rake assembly 222. The generally rectangular and flat bottom wall 206d includes predetermined peripheral edges. The first and second pair of opposing sidewalls 206e, 206f, 206g and 206h are rigidly connected to each other at their outer vertical edges. The intersecting bottom edges of each sidewall are then connected to the horizontal peripheral edges of bottom wall 206d to form the rectangular chamber 206c. The chamber 206c defining a cavity of a predetermined depth holds the cat litter 10 without any barrier wall within the cavity of the rectangular and non-compartmentalized chamber 206c.

[0097.7] The waste lid 228 is rotatably attached about a pivot point to at least one sidewall by fabric hook and loop fasteners or other suitable means to form a hinged connection to the attached sidewall. The rotation of the waste lid 228 is configured to cover the solid cat wastes 11 that are combed out of the cat litter 10 containing the solid wastes 11. The solid cat waste 11 is moved to the waste end 232 of the litter tray 206

by the moveable rake 222a for storing the waste at waste end 232 of the disposable litter tray under the cover of the waste lid 228 until it is time to replace the litter cartridge. The coupling mechanism 236 located on the top surface of the waste lid 228 cooperates with a coupling device 207 located on the underside or bottom surface of the lid system 204 that is mounted rotatably about a horizontal axis affixed to the inner surfaces of the housing 202 on the litter machine 200. The lid system 204 lifts the waste lid 228 to an open position when the moveable rake 222a is combing the cat litter for solid animal waste 11 to place in the waste storage area 206b at the wastes end 232 of the chamber 206c adjacent the sidewall 206h and to a closed position covering the cat solid waste 11 when the moveable rake 222a is moving away from the waste storage area 206b of the single chamber 206 into the main litter area or portion 206a of the tray 206. The moveable rake 222a moves across the chamber 206c at a predetermined generally constant height above the bottom wall 206d through the litter 10 while combing for animal solid wastes 11 and moves the solid wastes 11 from the litter collection area 206a to the waste storage area 206b without any barrier that would otherwise require the rake 222a to lift up over the barrier and thus change its heights above the bottom wall 206d as in cat litter boxes with the barrier wall 22 separating the litter area from the waste area within the prior art litter trays that are bifurcated.

[0097.8] Turning now to FIGS. 28 A-D, the litter tray 206 with a single chamber 206c having the litter and waste areas, 206a and 206b, respectively, therein and the floor 206d is shown in FIG. 28 A with a large cover 206i tightly fit over the single chamber tray 206 with the tray lid 228 at the waste end 232 thereof. In this manner, the

large cover 206i along with the single chamber 206c completes the litter cartridge 206 and this assembly of components that complete the rectangular box structure makes it suitable to ship with the litter 10 within the single tray chamber 206c as shown in FIG. 28 A. FIG. 28 B shows the tray lid 228 in the process of being lowered into the single chamber 206 of the litter tray 206 to cover the solid wastes 11 when the tray lid 228 is rotated from an open to closed position by movement of the rake assembly mounted on the litter box 200. The tray lid 228 includes two spaced apart magnetic materials 236 on top of the tray lid 228. The tray lid 228 is then magnetically coupled to a pair of system lid magnets 207 spaced apart on the underside of the system lid 204 opposite the magnetic materials 236 on the tray lid 228. When the system lid 204 rotates upwardly by the camming action of the components on the litter box 200 as the rake assembly 222 automatically sweeps across the single tray chamber 206c toward the waste end 232 to clean the solid cat waste 11, the magnetic coupling between the magnets 207 and materials 236 opens the tray lid 228 for depositing the solid wastes 11 beneath the tray lid 228 then it automatically goes to the closed position by reversing the camming action as the rake assembly moves away from the waste end 232 of the single chamber back to the litter area 206a. FIG. 28 D shows the large cover 206i placed over the single tray chamber 206c after the cartridge is used up. The solid cat wastes 11 are under the tray lid 228 and the cover 206i pressing against the top of the tray lid 228 keeps the solid wastes 11 in the waste area 206b when disposing of the spent cartridge 206. The cover 206i covers both the remaining litter and keeps the solid wastes below the tray lid 228 for disposal. A new cartridge 206 is selected, its cover 206i removed

Amendment dated: February 23, 2010  
Title: Self-Cleaning Litter Box  
Applicants: Alan J. Cook, et al.  
Attorney Docket No.: 31813-00007

and then inserted into the litter box 200. The old used cartridge 206 is then disposed of without a mess to the end user and without coming in contact with any of the solid wastes 11 or litter 10.